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A review of techniques in automatic programming assessment for practical skill test (Article)

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Abstract

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Computer programming ability is a challenging competency that requires several cognitive skills and extensive practice. The increased number of students enrolled in computer and engineering courses and also the increased of failure and drop rate in programming subject is the motivational factor to this research. Due to the importance of this skill, this paper intends to study the landscape of current scenario in assisted assessment for hands-on practical programming focusing on competency-based assessment. The Bloom Taxonomy is used as a competency-based assessment platform. The review showed to-date that there are several automatic assessments for programming skills. However, there is no common grading being applied. Thus, further research is required to propose an automatic assessment that grades the student achievement based on learning taxonomy such as Bloom Cognitive Competency model. © 2018 Universiti Teknikal Malaysia Melaka. All Rights Reserved.

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- Assisted Assessment
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- Competency-Based
- Programming

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